

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A Bulkhead

with type designation(s)
HITLIN/A60B

Issued to

Se Woon T&S Co., Ltd.
Kyungbuk, Republic of Korea

is found to comply with
DNV GL offshore standards
DNV GL rules for classification – Ships

Application :

Approved for use as class A-60 steel Bulkhead.

General application: Fire against either side.

This certificate is recognized by Transport Canada.

Product approved by this certificate is accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2021-03-31**.

Issued at **Høvik** on **2016-04-01**

DNV GL local station: **Ulsan**

Approval Engineer: **Ragnar Tonjer**

for **DNV GL**

Petter Langes
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

"HITLIN/A60B"

Composed of a stiffened steel bulkhead insulated on the stiffened side with 40 mm of type "Hitlin Board" density 200 kg/m³ from Se Woon T&S Co., Ltd. The insulation blankets are laid in the stiffener direction. The void of the stiffeners is filled with insulation of the same type. A 145 mm wide insulation strip is fitted over the stiffeners.

The insulation is fastened with ø3 mm steel pins and ø50 mm steel washers, 600 mm centres in the vertical direction. Pins shall be positioned over the stiffeners and in the middle of the blankets, between the stiffeners. The minimum number of pins is 1,5 sets/m².

See drawing mentioned under Type Approval documentation below for further pinning details.

Application/Limitation

Any surface materials used have to be approved for smoke and toxicity and low flame-spread characteristics (IMO 2010 FTP Code Annex 1 Parts 2 and 5) when required according to relevant rules.

Horizontal insulation blanket joint is not covered in this certificate.

Each product is to be supplied with its manual for installation and maintenance.

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Test report no. KOMERI-0402-15T2551 dated 2016-01-12 from Korea Marine Equipment Research Institute (KOMERI).

Drawing No. B 2015.11.11 dated 2015-11-11 from Se Woon T&S Co., Ltd.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

Marking of product

The product or packing is to be marked with name of manufacturer, type designation and fire-technical rating.

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)", DNV GL confirms that the products listed in this certificate are in accordance with Transport Canada's requirements.

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in DNVGL-CP-0338 Section 4.